

CLAIMS

We claim:

1. A method for treating a cereal material comprising treating a cereal material with a processing solution in a screw transporter and transporting the cereal material through the screw transporter (s).
2. The method according to claim 1 wherein the cereal material is selected from the group consisting of corn, oats, barley, rye, wheat, rice, sorghum and mixtures thereof.
3. The method according to claim 1, wherein the screw transporter is selected from the group consisting of a screw extruder and a screw conveyor.
4. The method according to claim 1 wherein the cereal material comprises absorbed solvent selected from the group consisting of an aqueous solvent, an organic solvent and mixtures thereof.
5. The method according to claim 4 wherein the aqueous solvent is water.
6. The method according to claim 4 wherein the solvent comprises at least one compound selected from the group consisting of wetting agents, reducing agents and pH modifiers.
7. The method according to claim 1 wherein the processing solution comprises an acid and sulphur dioxide.
8. The method according to claim 7 wherein the acid is lactic acid
9. The method according to claim 1 wherein the cereal material is treated with processing solution for a period of at least 1 hour.
10. The method according to claim 1 wherein the cereal material is treated with processing solution for a period of at least 3 hours.
11. The method according to claim 1 wherein the temperature ranges from about 15°C to about 65°C.
12. The method according to claim 1 wherein the processing solution is present in an amount ranging from about 0.30 to about 0.67 m³ of processing solution per metric ton of cereal material (about 2.0 to about 4.5 gallons of processing solution per bushel of cereal material).

13. The method according to claim 12 wherein the processing solution is present in an amount that will be completely absorbed by the cereal material.
14. The method according to claim 1 wherein more than one screw transporter is utilized.
15. The method according to claim 14 wherein discharge from the screw transporter is comminuted.
16. The method according to claim 1 further comprising separating germ, fiber and protein from processed cereal material to provide a starch containing stream.
17. The method according to claim 16 wherein the starch containing stream is hydrolyzed.
18. A method for producing a fermentation feedstock comprising using the starch containing stream produced in accordance with claim 16.
19. A method for producing a fermentation feedstock comprising using the hydrolyzed starch containing stream produced in accordance with claim 17.
20. A method for using the starch containing stream product of claim 16 as fermentation feedstock.
21. A method for using the hydrolyzed starch containing stream of claim 17 as fermentation feedstock.